

Title (en)

VISUAL LOCALIZATION AGAINST A PRIOR MAP

Title (de)

VISUELLE LOKALISIERUNG GEGEN EINE VORHERIGE KARTE

Title (fr)

LOCALISATION VISUELLE CONTRE UNE CARTE ANTÉRIEURE

Publication

EP 4155681 A1 20230329 (EN)

Application

EP 22197792 A 20220926

Priority

US 202117485046 A 20210924

Abstract (en)

A system and method for performing visual localization is disclosed. In aspects, the system implements methods to generate a global point cloud, the global point cloud representing a plurality of point clouds. The global point cloud can be mapped to a prior map information to locate a position of an autonomous vehicle, the prior map information representing pre-built geographic maps. The position of the autonomous vehicle can be estimated based on applying sensor information obtained from sensors and software of the autonomous vehicle to the mapped global point cloud.

IPC 8 full level

G01C 21/30 (2006.01); **G01C 21/34** (2006.01); **G01C 21/36** (2006.01); **G01S 17/89** (2006.01); **G01S 19/48** (2010.01); **G06T 7/33** (2017.01)

CPC (source: EP US)

G01C 21/30 (2013.01 - EP US); **G01C 21/3407** (2013.01 - EP); **G01C 21/3602** (2013.01 - EP); **G01S 5/16** (2013.01 - EP); **G01S 7/4811** (2013.01 - EP); **G01S 7/4813** (2013.01 - EP); **G01S 7/4815** (2013.01 - EP); **G01S 7/4817** (2013.01 - EP); **G01S 7/4863** (2013.01 - EP); **G01S 7/499** (2013.01 - EP); **G01S 13/865** (2013.01 - EP); **G01S 13/867** (2013.01 - EP); **G01S 13/931** (2013.01 - EP); **G01S 17/10** (2013.01 - EP); **G01S 17/42** (2013.01 - EP); **G01S 17/66** (2013.01 - EP); **G01S 17/86** (2020.01 - EP); **G01S 17/931** (2020.01 - EP); **G06T 7/50** (2017.01 - US); **G06T 7/70** (2017.01 - US); **G06T 7/77** (2017.01 - EP); **G06T 2207/10028** (2013.01 - EP US); **G06T 2207/30252** (2013.01 - EP US)

Citation (search report)

- [X] US 2019154842 A1 20190523 - ADACHI JEFFREY MINORU [US]
- [XI] WO 2021056190 A1 20210401 - BEIJING DIDI INFINITY TECHNOLOGY & DEV CO LTD [CN]
- [XI] WO 2020147134 A1 20200723 - BEIJING DIDI INFINITY TECHNOLOGY & DEV CO LTD [CN]
- [XI] WO 2020154966 A1 20200806 - BAIDUCOM TIMES TECH (BEIJING) CO LTD [CN], et al

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4155681 A1 20230329; **EP 4155681 B1 20240522**; US 12062202 B2 20240813; US 2023094695 A1 20230330

DOCDB simple family (application)

EP 22197792 A 20220926; US 202117485046 A 20210924